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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

29 SEP 2004

Applicant's or agent's file reference 311/MAS/2002	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US 03/12414	International filing date *(day/month/year)* 22.04.2003	Priority date *(day/month/year)* 23.04.2002
International Patent Classification (IPC) or both national classification and IPC C07D495/04		
Applicant DR. REDDY'S LABORATORIES LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

   ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
10.11.2003	30.07.2004
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Bakboord, J Telephone No. +49 89 2399-2168

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US 03/12414

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-10 as originally filed

Claims, Numbers

1-15 as originally filed

Drawings, Sheets

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

   ☐ the entire international application,

   ☒ claims Nos. 13

   because:

   ☒ the said international application, or the said claims Nos. 13 relate to the following subject matter which does not require an international preliminary examination (specify):

   see separate sheet

   ☐ the description, claims or drawings *(indicate particular elements below)* or said claims Nos. are so unclear that no meaningful opinion could be formed *(specify)*:

   ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

   ☐ no international search report has been established for the said claims Nos.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

   ☐ the written form has not been furnished or does not comply with the Standard.

   ☐ the computer readable form has not been furnished or does not comply with the Standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-15
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-15
Industrial applicability (IA)	Yes:	Claims	1-12, 14, 15
	No:	Claims	

2. Citations and explanations

see separate sheet

III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

Claim 13 relates to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of these claims (Article 34(4)(a)(i) PCT).

V Reasoned statement under Art 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

V.1 The present invention relates to a novel crystalline form of olanzapine.

V.2 Reference is made to the following documents:

D1: US-B1-6348458, cited in the document
D2: EP-A-0831098, cited in the document
D3: WO-A-0218390
D4: WO-A-02060906 (GENEVA PHARMACEUTICALS INC) 8 August 2002
Document D4 was published after the priority date. In the presumption that priority is valid this document is not regarded as prior art.

V.3 Novelty

Document D1 discloses a process for the preparation of crystalline polymorph form III (claim 9), form IV (claim 10) and form V (claim 11) of olanzapine.
Document D2 discloses a process for the preparation of crystalline polymorph form II of olanzapine (claim 9).
Document D3 discloses a process for the preparation of crystalline polymorph form I of olanzapine (examples 3-6).
It is noted that document D4 discloses a crystalline polymorph form X of olanzapine (claims 1-13).

A polymorph form VI of olanzapine is disclosed in none of the documents. Claims 1-7 therefore fulfill the requirements of Art 33(2) PCT.

Claims 8 and 9 describe a process for the preparation of polymorph form VI of olanzapine and are novel by consequence.

Claims 10-12 describe a composition comprising the polymorph form VI of olanzapine and are novel by consequence.

Claim 13 describes a method of treating a disorder of the central nervous system using the polymorph form VI of olanzapine and is novel by consequence.

Claim 14 describes a medicine comprising the polymorph form VI of olanzapine and is novel by consequence.

Claim 15 describes the use of polymorph form VI of olanzapine for the manufacture of a medicine and is novel by consequence.

V.4 Inventive step

Starting from documents D1-D3 the problem to be solved may be regarded as how to provide novel possibly improved crystalline polymorph forms of olanzapine. The solution of the applicant resides in providing the polymorph form VI. Such a new polymorph can only be regarded as inventive if the novel polymorph represents an unexpected effect or property in relation to the known polymorphs I-V. However no such effects or properties are indicated in the application. Inventive step can therefore at present not be acknowledged (Art 33(3) PCT).